

AMERICAN BEE JOURNAL

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No. 24



Apiary and Home of C. H. Dibbern, of Rock Island Co. Ill
(See page 502)



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Engravings For Sale

We are accumulating quite a stock of engravings that have been used in the American Bee Journal. No doubt many of them could be used again by bee-keepers in their local newspapers, on their stationery, or in other ways. Also, if we can sell some of them it would help us to pay for others that we are constantly having made and using in our columns. If there is any of our engravings that any one would like to have, just let us know and we will quote a very low price, postpaid. Address,

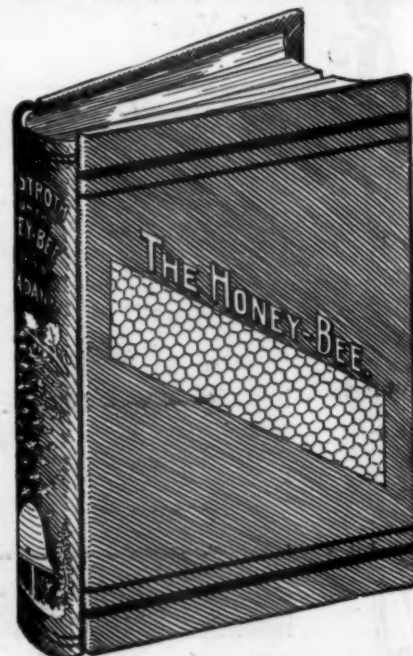
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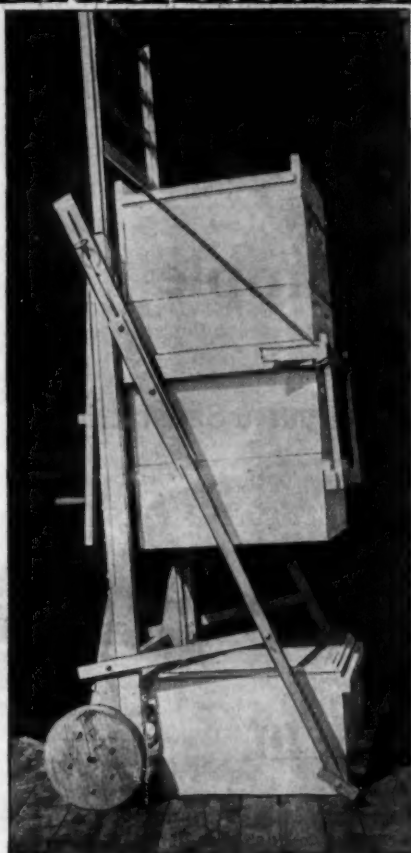
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Swarming Done Away With

The illustration shows one of the A. K. Ferris hives under manipulation for Comb Honey Production.

Every bee-keeper will want to read about Mr. Ferris' hives, which are so large that they have to be handled with a small derrick.

Another important contributor on this great swarming problem is Mr. G. M. Doolittle, author of "Queen-Rearing." Mr. Doolittle's plan is no doubt a perfect solution for localities where the same conditions as those in his own apiary exist.

Photographs illustrating every point will be used in connection with these articles, and every effort will be made to have each thought so clear that any bee-keeper can immediately apply the teachings to his own apiary. Never has the outlook for so many interesting contributions been brighter than it is at the present time. Every bee-keeper who does not take *Gleanings* will surely not want to miss the remaining issues of 1906.

If you have not seen the first installment of this series, send in your name for a three-number trial subscription which will be given free of charge. The April and May numbers will be mailed to you, and by June you will undoubtedly be so interested that you will want to take out a six months' subscription at least, the special price of which will be 25 cents.

If you choose to remit at once, make your request for the above issues in addition to the regular numbers for six months beginning June 15th, and we will send them free of charge.

Gleanings in Bee-Culture
MEDINA, OHIO

SECTIONS

Sections are in great demand at this season of the year. We are running full capacity, but can hardly supply the call for No. 1 Sections of all sizes.

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GERMAN BEE-BRUSH

Some months ago Mr. R. F. Holtermann called our attention to a bee-brush which he received from Germany, made of genuine bristle or horsehair. He had used one a whole season, washing it out often, and it appeared to be as good at the end of the season as at the beginning. He considered it so far ahead of anything he had ever seen or used that he wanted no other. We concluded if it was so good for him it must be equally good for others. We are now provided with a stock which we offer at 25 cents each; by mail, 30 cents. The bristles are black, and about 2 inches long, extending 8 inches on the handle. Made of white hair it would cost 5 cents more.

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AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

(Entered at the Post-Office at Chicago as Second-Class Mail-Matter.)

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GEORGE W. YORK, Editor

CHICAGO, ILL., JUNE 14, 1906

Vol. XLVI—No. 24



Editorial Notes and Comments

Denatured Alcohol and Poorer Grades of Honey

There is general rejoicing that Congress has freed denatured alcohol from the burden that has been upon it, and that now alcohol can be used to compete with gasoline and kerosene. Bee-keepers share in the general interest, and have besides a special interest from the fact that it may make an outlet for the poorer grades of honey. Whether that shall amount to anything or not depends upon the worth of a gallon of denatured alcohol, and how much honey it takes to make a gallon of alcohol. Probably we shall know definitely about that before the new law goes into effect—Jan. 1, next.

It sounds just a bit strange to find bee-papers rejoicing at the cheapening of alcohol, when none of them would advocate the use of alcoholic drinks; but denatured alcohol is not an alcoholic drink in the proper sense of the word. It can no more be used as a drink than can gasoline, but it can be used as a fuel, and in other ways. The only wonder is that the powerful lobbies that are generally credited with controlling Congress, should have allowed the Bill to pass. But whenever the people rise in their power, then even "powerful lobbies" in Washington, or anywhere else, have to take a back seat. Some of these days "the people" will arise and dethrone King Alcohol as a beverage; and then there will be rejoicing, not only on earth, but in Heaven as well. May that day speedily come!

Cuban and Porto Rican Honey and the Tariff

EDITOR AMERICAN BEE JOURNAL—

Dear Sir:—I have been reading bee-literature for the past 4 years, and in that time I have heard nothing said about a tariff on foreign honey high enough to protect the American article. With the present tariff of only 1½ cents per pound on Cuban honey, is it any wonder that honey does not bring a higher price?

It will be seen from enclosed clipping from the New York Tribune of April 9, that the American honey-producer has still more to fear in the way of Cuban competition. If the California fruit-growers could ask for and get a protective duty on oranges, which they did (I think it was in 1896), I don't see why the honey-producers of the entire United States and her adopted children (one of which is Porto Rico) should not wake up and try to do the same.

I hope the American Bee Journal, and also the National Bee-Keepers' Association, will give this matter their attention.

Porto Rico, April 24.

W. J. YOUNG.

The clipping referred to states that there has been a conference between the officials of the United States and of Cuba, "with the purpose of framing a new reciprocity treaty to replace the existing convention," and says:

The reason for the preparation of the new treaty is that the officials here have become convinced that America is getting by far the

worst of the bargain under the present arrangement. While nearly all of the exports from Cuba come to our ports, only a little more than one-third of the imports into Cuba are furnished by American farmers and merchants.

Therefore, in framing the new treaty some changes of the utmost importance have been made in the tariff schedules, and in all cases these are calculated to increase the advantages of American shippers. Existing rates of duty have been lowered on goods entering Cuba, and other amendments have been made that officials say will redound to American advantage.

On the face of it there is nothing said in the foregoing that threatens any change inimical to the interests of honey-producers in the United States. The statement is that important changes have been made in the proposed new treaty, but that *in all cases* these are to the advantage of American shippers. Certainly there is nothing in that to alarm American bee-keepers.

Yet when our solons at Washington begin tinkering with a tariff there is no telling what will be its shape when they are through with it. The whole question, however, is rather one of politics than of bee-keeping, and it is a little doubtful that bee-keepers could agree unanimously as to what would suit them if the whole question were left to their decision. Certainly, however, they have the right to protest against any injustice, and it will do no harm to keep informed.

"The present treaty does not expire by its own term for 3 years," and it may be that "the new treaty will be withheld from the Senate until next session."

Coverdale's Oilcloth-Super Feeder

Frank Coverdale, of Iowa, tells about it in the Bee-Keepers' Review. With an idle super on hand, less than 5 cents for oilcloth completes the feeder, which may be used over or under a hive, or it may be used as an open-air feeder. Mr. Coverdale says:

It is extremely simple; a dovetailed comb-honey super is lined with oilcloth which costs here 12½ cents a yard; and it makes a feeder that will hold about 3 gallons, and costs only 4 cents each, or 25 feeders for only \$1.00. I believe the cloths will last for years. I have fed 3 times with some of mine, and can see no sign of injury.

These feeders set on top of the hive, or the hive may be raised from the bottom-board, and the feeder set underneath, after the required amount of syrup has been put into it. Long grass or hay must be thrown in; this is to prevent the bees from getting drowned.

Every comb-honey producer will usually have plenty of empty supers, and it is handy to fix them for this business. These cloths may be used in any super that will support them; even the different apartments of the T-supers may be fitted to take them. A shingle may be let down to the tins in one or all of the apartments, care being taken to see that the bees always have access to the feed; or if placed underneath be sure there is an opening in front to allow the bees to fly out at all times.

Those who use dovetailed supers or section-holders can key up the supers. When putting in the oilcloth fold the corners so as not to allow any chance for leakage. Push in a little sharp tack at each corner, close to the top edge of the cloth. Do this to keep the cloth sound from holes. Use just enough of these brads to hold it in place.

We use the cheap grade of oilcloth, and, so far, have met no objections. See that you get sound cloth. Hold it up to the light, and if there are any defects they will show.



Miscellaneous News & Items

J. C. Acklin, of St. Paul, prominent among Minnesota bee-keepers, died very suddenly at a hospital lately. The brief notice we received from a friend did not contain any of the particulars. But we expect to secure and publish them in a later issue. Mr. Acklin was a noble man and sincere friend. He will be greatly missed in Minnesota bee-dom.

LATER.—Since the foregoing was written, we have received the following from the A. I. Root Co.:

Mr. J. C. Acklin, St. Paul Manager of the A. I. Root Co., while delivering some bees in Highwood, a suburb of St. Paul, was stricken with apoplexy from which he died the following morning, May 26. Mrs. H. G. Acklin, who in former years was in active management of the agency, resumes charge again, and the business will be continued as usual. An able assistant who has for years done a large share of the work is still in service, and orders will be promptly cared for.

Dr. C. C. Miller and **G. M. Doolittle** are the two leading apiarian writers of the world. We believe that no two other men contribute as much to the present-day literature of bee-keeping as they do. And both are intensely practical, and so are also successful with bees.

Mr. Doolittle wrote us June 4 that he had been in poor health since last February, and during the most of May he was able to do but very little, being confined to the house quite a share of the time. But we are glad to say that when he wrote us he was feeling better, though still quite weak.

Dr. Miller was 75 years old (no, 75 years "young") last Sunday, June 10, and, so far as we know, in excellent health for one of his many busy years.

We are sure all the readers of the old American Bee Journal will unite with us in extending heartiest congratulations to both Dr. Miller and Mr. Doolittle, and trust that they may live yet many years to continue to bless not only bee-keepers but the whole world.

Our Special and Premium Offers are always made to those subscribers who are entitled to receive the American Bee Journal at \$1.00 a year, and all new subscriptions that are received on our premium and special offers are at \$1.00 each. Hence, such offers do not apply in countries where there is an extra postage charge for sending the American Bee Journal, such as England, France, Germany, etc. Any one living in those "foreign" countries where such extra postage is charged, would need to send the price of the Bee Journal (\$1.00) and the extra postage. In England that would be \$1.50. For instance, in this country we offer Dr. Miller's book, "Forty Years Among the Bees," free as a premium for sending us two new yearly subscriptions—that would be \$2.00; but if the two new subscriptions came from England or Germany, it would be \$3.00; or 50 cents more to cover the extra postage on the American Bee Journal sent to "foreign" countries, or those not taking domestic postage rates.

Home and Apiary of C. H. Dibbern.—The pictures presented on the first page this week are the apiary and home—that the bees helped to pay for—of Charles H. Dibbern, of Milan, Ills. The main figure in the apiary view is Mr. Dibbern himself, holding in his hand his latest invention—the queen-trap, which he has used for a dozen years for hiving and controlling swarming. The group of children in the foreground consist of two grand children and a couple of neighbor's children. The apiary now consists of about 100 colonies, as Mr. D. has concluded that the locality will not support more profitably; besides, he has now arrived at an age where he does not care to do the hard work required in a larger apiary. The picture was taken early this spring, and as supers had not yet been put on, the hives have a somewhat squat appearance.

Mr. Dibbern commenced bee-keeping just 40 years ago this spring, and has had bees continuously ever since. He has never had any serious disease among his bees, and has never seen a case of foul brood. Like most bee-keepers with the bee-keeping instincts born in them, he has been a

constant experimenter, and as a result has produced several inventions of merit.

The T-super was original with him, and he described it in the American Bee Journal early in the '80's.

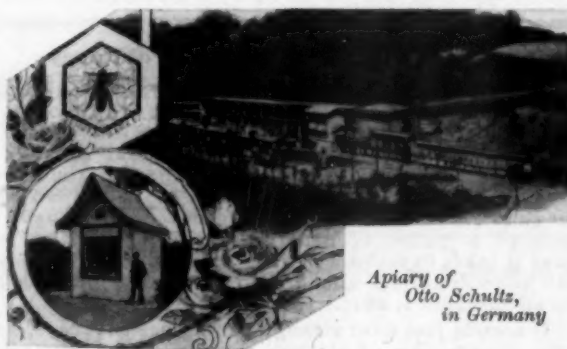
In 1889 he discovered the principles of the horizontal bee-escape, and published his discovery in Gleanings. This proved a little premature, as he had not perfected the invention, and a host of others took up the idea and the escape was soon perfected by others.

A hive also was "invented" which he now has had in use for some 20 years, and he sees no reason for changing it.

His latest is the queen-trap, which, of course, is a modification of the Alley trap, but, in his opinion, is a great improvement in several particulars. He has never patented any of his inventions, and always gave his ideas freely to the bee-keepers of the world.

The home (see second picture) is a modest structure, built rather for comfort than any particular style or display. It is situated on rising ground on the north side of Rock River, near Black Hawk's Watch Tower, now a very popular resort. The group consists of several friends and his entire family, consisting of wife, son, daughter, daughter-in-law, son-in-law, "the baby," and two other grandchildren.

Otto Schulz in Germany.—We have received a souvenir postal card from Prof. A. J. Cook, who has spent the past year in Germany, as our readers know. The picture on the card is shown here, and it was written from Buckow, Germany, May 10, 1906, and reads as follows:



Apiary of
Otto Schulz,
in Germany

A great day here. Otto Schulz is a genius. He makes foundation cells full-depth and very fine. He forms wax sheets on a large wheel, then thins at pleasure between rolls.

It is very beautiful here. I have had a splendid time, but my wife has been sick in the hospital for several weeks. She is now safe, and at home. My wife and daughter will remain here another year. I leave next Tuesday, and get home Sept. 1.

A. J. Cook.

Errata.—On page 461 two regrettable errors occur. In the first column, in the second line of the fourth paragraph, several words are omitted. The whole sentence should read, "May 20 a frame of brood was taken from each colony having 8 brood, and given to one having only 6."

The omission of a comma in the next paragraph accounts for the absurd statement that "Two supers of 44 sections each were placed over the lower super." Putting the comma where it belongs changes the sense entirely, making it read, "Two supers of 44 sections each were placed over, the lower super containing 12 bait-sections."

W. H. Putnam, editor of the Rural Bee-Keeper, made this office a call recently when in Chicago. Mr. P. is perhaps the "heavy-weight" among all the bee-editors when it comes to avoirdupois. And he is as jovial as he is large. It was our first opportunity to have a somewhat extended conversation with him, although we had a "How do you do?" acquaintance with him before.

A Good Thermometer, mounted on a large-size wood back, is being used as an advertising novelty by Walter S. Ponder, a bee-supply dealer at Indianapolis, Ind. One sent to this office is doing good service these hot days. It's somewhat satisfying to know just what the temperature is even if the knowledge doesn't help cool one off any.



Contributed Special Articles

Small vs. Large Hives and Supers

BY C. W. DAYTON.

I NOTICED the statements relating to Mr. Andrew's bees, honey and hives on page 180. Simply for mutual examination I wish to compare conditions.

Mr. Andrews had 250 colonies, and I had 160, spring count. His yield was 25 tons, and mine 12 tons. Mr. Andrews moved to oranges. I did not have oranges. Sage alone. But if he has oranges and sage both in one location it would not be any better than sage alone, except that oranges might give 2 or 3 extractings before sage came in. I did not extract until May 15. Oranges, as I understand, yield water-white, or very light amber at Riverside (or Corona). Here, oranges give dark amber, and it will not pay to mix with sage. Mr. Andrews may have extracted several times before I extracted at all. It may be that sage would last longer here at Chatsworth on account of the damper location. It was damp and cloudy here from April 10 to May 20. The clouds came over the mountains from the coast. Riverside and Corona are so far inland that there is far more clear weather when the bees could gather honey earlier in the season.

Mr. Andrews' hive I take to be the regular, full-sized Langstroth, 10 frames in the lower story and the same size story above. My lower stories are for 10 frames, 13 inches long, and an extracting super on top 13 inches long, and 5 inches deep, or one-third the size of Mr. Andrews' extracting super. My lower story is only $\frac{3}{4}$ the size of Mr. Andrews'.

I allowed the honey to become entirely sealed over, including both outside combs, and then allowed them to stay on the hives 3 to 4 days until they were built solid with brace-combs between the stories. From my 160 colonies there were 350 swarms, but only 100 were hived. Mr. Andrews' yield was 50 pounds to the colony in excess of my yield. At 5 cents per pound it is \$2.50, not counting receptacles. If the cost of production is 4 cents per pound it comes to \$2.00, leaving a net profit of 50 cents in favor of Mr. Andrews' hive, yield, or something. Or, is it possible that my small hive and awfully small super will do as well as larger?

At the first of the season I had 12 or 15 colonies with 2 of these little supers on each. When I had extracted 3 or 4 times I took the extra super off, only leaving one, as it seemed that I got just as much honey from the one.

Of course, 50 pounds of honey is considerable honey, but 50 cents profit is not much difference, yet it is one-fourth. But I wonder now if 4 of my hives, which are about one-half as large as Mr. Andrews', cannot be manipulated and handled as easily as 3 of the regular and larger size. One thing, I never use a brush on these small combs, and put 9 combs, (or a whole super) in the extractor at once. I have not brushed bees off extracting combs in 10 years. Of course, small combs are easier to handle all around, and more rapid. It takes me just two minutes to go 100 feet from the extracting house, take the cover off the hive, smoke the bees, take the combs out and put the empty combs in their places, close the hive, and get back into the extracting house again. I have the idea that it would take 5 or 6 minutes with the large hive. Of course, I must extract oftener where the small super is used, but I extract from but few lower stories, and that where there is no queen below or the super remains full a long time. As I understand, the large stories run from 32 to 38 pounds at an extracting, when they are sealed, and my small ones go from 22 to 28 pounds. The large combs are thicker in the middle at the top in most of the colonies than at the ends and along the lower half.

It has long been my belief that there are but a small proportion of the bees which gather honey compared to the whole colony, a large share standing around on the honey doing nothing, or else there is more inside work in the hives than we know of. If 5 pounds of bees went out after honey 5 times a day, they ought to bring back 25 pounds. And as sage honey is so easy to get they could easily make 25 trips

a day if they were so disposed, as the days are 17 hours in length and sage is unlike many other honey-plants, in that the honey tubes are open for the visits of the bees all day long.

One thing against the large hives and supers is the trouble they make to carry them over the dry years when we need so few bees in the hives. Where the bees can be moved into the orange-groves the trouble does not occur, but very few apiaries are, or could be, so situated here. But it is much more labor to move large hives than small ones. Too much for the 50 cents I have figured above. Every one who has seen my apiary in years past has detested such a stingy super and hive. But my management is different from that of the large hives. In the spring I manipulate the brood-combs so that the small combs become solidly filled. If there is any pollen or solid combs of honey it is caused to be removed and carried into the super where such off grades can be extracted at the first round and kept separate from the sage. With larger super the dark would go in with considerable sage. Small supers enable more perfect separation of grades.

When the bees get the combs of honey all sealed and properly ripened they retire from the supers, only enough bees remaining to keep guard over the honey, and then the main force of bees begins to cluster out at the entrance. I tell from outside indications when they are ready to extract. When the combs are completely finished in capping and ripening the bees are very easily shaken off, so that no brush is necessary. I set the combs in tin-bottomed boxes on the wheel-barrow which hold 24 combs each. I have 5 of these boxes and 150 to 200 extra empty combs so that I do not open hives the second time to put the combs in.

The quick handling of small combs, without brushing, gives robber-bees very little time. But robbers seldom are numerous until near the close of the season. At that time I take out honey in the middle of the day to keep the extractor going until dark, if necessary. Then through the night, if robbers trouble my work, the boxes of empty combs remain stacked up with robber-cloths (cloths wet with carbolic-acid-water) over each. This renders them unattractive to robbers, while on the wheel-barrow, and also to the inmates of the hives they are put into. The most of the trouble is caused by the bees of the colony rushing outdoors at the smell of the combs within, and perhaps turning to dig and pull at the cracks of their own hive. And, especially, forgetting in the excitement, to guard their own entrance. Carbolicized combs maintain order in the colony in which they are placed. In a few hours the acid is all evaporated and the combs are cleaned up more gradually, and with little strife.

It is seldom that a box of combs is brought in to extract containing a dozen bees, but, occasionally a few are. The boxes of combs are slid off the wheel-barrow onto shelves. Above the shelves is a 20-inch strip of wire-cloth extending entirely around the extracting house. The bees climb out of the combs and run up on the screen and soon find the escapes where they get out of the building. But most of the bees brought in are young, as they cling to the combs and are more difficult to shake off than old bees. The young bees go up on the screen in a cluster and stay through the night. A corner toward the sunrise is chosen. In one or two days the young bees find their way out the escape. Near the escape on the outside of the building I keep a nucleus hive. It is usually started with a cluster of bees the size of your fist, and a little chunk of brood such as most bee-men throw out in the grass. They start to rear a queen of their own, but in swarming-time it is easy to put in a ripe queen cell from one of the best colonies. They build combs from a strip of wax as a starter, except the one brood-comb I put in empty to give their queen a chance to lay. When one nucleus becomes strong enough to "go it" without further help it is moved away and another started in the same way. All the stray bees that come out go straight into the nucleus the same way as others have traveled, and a bee that has stayed out of its hive a day or two is always accepted, or, in fact, invited in. The older bees go home at once. Some of these nuclei have given 50 pounds of honey, and every one gives something, and will fill a regular hive in time for the harvest the following year.

The "breeding up" of the colonies into working strength is very much like the growth of plants. Plants grow faster and faster as the weather warms up until they reach the climax; then there is a slackening. My hives are abundant, in size, early or late, or, as, we may say, both ways from the climax. No old queen, after hiving with a swarm or any

of the newly-reared queens, reach so large an amount of brood as the queen that begins in the spring and builds with the expectation of casting a swarm. They prepare for the population of 2 full hives then. The reason the hives are so over-populated at this time is because the old bees, that should be off to the fields gathering honey, are loitering around the hive waiting to depart for the woods with the old and much respected queen. There are not often too many bees, but the bees are not in the right place. In order to set the bees at work we must change their dispositions, and that necessitates the removal of their queen.

Now, if the colony swarms some day, and takes the old queen along, the old bees off in the fields do not, when they return and find the old queen gone, get the pouts and stand around doing nothing. They keep on at their work more industriously than ever, seeing that they have the future prosperity of the colony depending upon them to an increased degree. When a swarm issues I take the old queen away at once. Then I confine the bees long enough that they forget the purpose for which they came out of their hive. Then they are permitted to return to the old hive gradually, as if returning from the fields. If they are permitted to come out and cluster and then are returned again and again the disposition of departing becomes more and more fixed upon them, so that when the honey they take along becomes digested and converted into wax for comb-building in their new home, they have become so disinclined toward, and forgetful of, their old domicile as to regard a new home as the only possible alternative. Chatsworth, Cal.

Bees Destroying Queen-Cells With Live Queens

BY ALLEN LATHAM.

ON page 445 Mr. Alley says: "I wish to inform the bee-keepers of the world that no bees, queenless or otherwise, ever destroy or tear down queen-cells that contain *live* queens. A colony having a queen (either a virgin or a fertile one) will not destroy a queen-cell until a queen first stings the imprisoned or embryo queen; then the worker-bees complete the destruction."

I know Mr. Alley, and I know that he believes that he is right. He will say, too, that others are mistaken in believing that bees will tear down cells when no queen is present. I wish that he was right, for then I should never bother to protect cells with cell-protectors made of wire-cloth. If bees are imprisoned in a hive they will gnaw away at a queen-cell till all the wax is off the cocoon portion, and frequently get a hole through above the cocoon. As soon as that hole is through it is good-bye queen, unless help comes.

Therefore, Mr. Alley, I refuse to be informed, and I rather think that I shall not be in a class of one in refusing to learn this lesson.

Does Mr. Alley, or anyone else, believe that a queen can sting the imprisoned virgin or embryo before a hole is gnawed? Does any one think that it is possible to thrust the sting through a wall of wax? If he does, then his power of belief is big.

I wish to inform the bee-keeping world that the embryo queen, or the imprisoned queen, is never stung till after a hole is made in the cell. Personally, I doubt if the embryo queen is usually stung at all. A vigorous virgin nearly ready to emerge may arouse the ire of the free virgin, and be stung, but many an embryo is simply hauled out by the workers.

The hole is begun by the free queen. As soon as a cell is thus injured the workers will tear it down.

Many a time I have seen cells with holes in them, and the queen inside still alive. Has Mr. Alley not seen this? If the queen is alive, has she been stung?

Last fall I was tardy in caring for a batch of cells, and when I went for them I found that a queen was out gnawing at the other cells. In one she had a hole which had been enlarged enough to pass a small pea through. Though others had been gnawed, none had holes. I wished to save all the queens possible, and as I had been successful formerly in patching up torn or broken cells, I determined to save this one with the hole in it. I laid a bit of comb foundation over the hole and sealed it down with a hot iron. That cell and all the others of the batch hatched strong queens.

The one in particular, which, if Mr. Alley is right, had been stung, became mated and showed every appearance of being a good queen.

If Mr. Alley can explain away the last-stated stubborn facts, perhaps I shall relent and consent to be informed. Mr. Alley is a man of wide experience, and he has kept bees twice as long as I, and I naturally would hesitate to question what he has to say. I have read the article from which I quoted with great interest. There are lots of good things in that article, but in the case quoted Mr. Alley has proved himself mortal, just like the rest of us.

Norwich, Conn.

13—Dadant Methods of Honey-Production

BY C. P. DADANT.

A MUCH-DEBATED question in the production of extracted honey is whether to remove the honey before it is ripe, and ripen it by artificial means, or remove it only when entirely ripened. We prefer the latter method.

When the first extractor was introduced, bee-keepers had much less experience about the ripening of honey than they have to-day. It seemed quite natural to remove the honey just as fast as gathered by the bees. Larger quantities could thus be harvested, but it did not take the producer long to find out that such honey often had no consistency, and would run like water. In fact, fresh harvested honey often drips from the cells when the comb is slightly inclined out of the perpendicular. This is, however, by no means constant, for some kinds of honey, in dry seasons, prove ripened very shortly after the gathering. Honey from heather is often mentioned by French apiarists as impossible to extract, owing to its great density. I have never had the good luck to visit a producer of heather honey, or I should have made particular enquiry as to the possibility of extracting it promptly after it has been brought in.

But our main crops of honey in the Middle West are not such as will bear being harvested at once without requiring artificial ripening afterwards. We have tried both artificial ripening and the more popular way of allowing the combs to remain in the super until the bees have thoroughly evaporated the excess of moisture. The latter method is, in our opinion, much preferable. There is but one thing that would induce us to extract honey before it is fully ripe—the impossibility of furnishing the bees with a sufficient number of supers.

We have seen a few such seasons, and in those instances we have taken the pains to place the honey in open tanks in warm rooms. Usually, when there is an extraordinary season, the honey is less watery than in poor seasons, and the time required for ripening is therefore less. A very wet season, when honey contains a great deal of water and evaporates slowly, is usually a poor honey season anyhow. In such a season we leave the supers on until a few days after the crop is over. We have sometimes taken the additional precaution of keeping the greater part of the honey in a tank for a few weeks. In a first-class year, if we are compelled to extract for want of a sufficient number of supers, we sometimes take off the first supers filled, leaving the last one on the hive for later extracting.

The question has often been asked: Must honey be sealed over to be considered ripe? I do not believe that sealing is a criterion. There are seasons when the bees will seal combs when the honey is insufficiently ripened. We have seen this happen oftener with basswood than with any other crop. In such cases the honey may ferment, and will, a little later, burst the cappings. This may not be noticed if the honey is still on the hive, for the bees will then look after it and probably manipulate it and transfer it from one cell to another, as the careful housekeeper transfers her preserves when they show signs of fermentation. The bees have not the resource of boiling or heating their stores to remove the germs of fermentation, but trust them to do for the best with the means they have at hand. But if the honey which is capped and unripe has been removed from the hive by the bee-keeper, and has been extracted, he will soon notice that it forms gas-bubbles, and the watery portion will come to the surface. If the honey has been kept in the comb, the capping bursts and the liquid honey forms out. But this sealing of unripe honey is a rare exception. As a rule, the bees are very careful to ripen the honey thoroughly before sealing it.

On the other hand, if the bees have been supplied with a

great deal of empty comb, and if the colony is very populous, the honey will be scattered over a great area in the super and will be ripened readily, but little of it will be capped, until they ascertain that the crop is coming to an end. In such circumstances the more or less capping of the honey will depend most probably on the temperature. If it is low, the bees will concentrate their stores over the cluster and will more readily seal a part of the filled combs. If the temperature is high, and the hive very populous, the honey will remain scattered over a greater area and less of it will be sealed.

The temperature has a great deal to do with the behavior of the bees, and it is probably owing to its action that bee-keepers differ in their opinions as to the actions of the bees. In Northern latitudes, where the nights are cool, the question of retaining the heat in the hive has a much greater influence on success than in localities where the great question is how to keep the temperature of the brood-nest and of the supers low enough so that the combs may not break down. So we can not lay down any rule that will serve for all climates, as to whether we may expect the bees to ripen all their honey before any of it is sealed, or whether they may seal it as fast as ripened. It is a good thing to err on the safe side, and wait until a great portion of it, at least, is sealed, before attempting to remove it. But in any case where there is doubt as to the sufficient density of the honey, it is well to keep it in an open vessel in a warm room—in as hot a room as you may have—during the remainder of the summer.

The late Chas. F. Muth—who was an authority on honey, because he produced so much of it and bought and sold hundreds of tons of it—was in the habit of ripening his honey regularly, by storing it in tanks, covered with a cloth, in an attic. Honey harvested in June or July was thus kept by him until early in September, when it was put in retailing packages, and would granulate almost immediately afterward.

Our method has been to remove the honey only when it is ripe, as far as we can judge, and it is only in very rare instances that we have made any mistakes. Cool, wet seasons are the most dangerous. But we have harvested hundreds—I might almost say thousands—of barrels of honey which was barrelled at once and rolled into a dry cellar, and did not see the light again until it was prepared for retailing, in October, when we found it almost invariably perfectly solid, with a regular grain of granulation, resembling butter.

I see that lately a number of our European experimenting apiarists are discussing the density of honey, and great differences are shown as to its condition when first harvested. I believe many people have but very remote ideas as to the great differences in density of honey fresh-gathered in different countries, under different degrees of heat, and with different hygrometric conditions. Stating how much water fresh honey contains would be as impossible as stating how much rain-fall may be expected during any one month in any locality.

Hamilton, Ill.



Pollen—How Use to Best Advantage

BY G. M. DOOLITTLE.

EARLY pollen," has a musical sound to all bee-keepers, and when you ask one as to the time of year that the bees first begin to gather pollen in his locality, he is all attention, and will tell you the earliest period he ever knew the bees to bring in the small loads, which are the harbinger of brood-rearing. But ask the average bee-keeper from what source this pollen comes, and four out of five can only guess at the matter, and that guess twice out of three times will be, "from willow."

This guess may be right in some localities, but in this locality the first pollen comes from what is more commonly known as "skunk cabbage," from the smell the plant emits when the leaves are bruised, and from the cabbage appearance of its growth when it has arrived at maturity. But in early spring there is nothing to be seen of this cabbage growth; just a gnarled, pointed, reddish-colored hood, that rises about 2 or 3 inches out of the ground, inside of which, rising on a stem, is a little ball of flowers about as big as a marble, and this ball of little, short flowers are very rich in pollen. The hood has on one side, a slit or crevice in it, oftentimes hardly large enough for the bee to squeeze in, and as the ball of flowers fills the hood to within about bee-

space all around, the bee which works on skunk cabbage for pollen gets covered more or less all over with the yellow dust, so that it makes her appear almost a laughable object as she runs into the hive. I have seen this dust from a thirty-second to one-sixteenth of an inch thick on the back or upper side of the abdomen of bees when they are entering the hives, though this is the extreme.

Then the hood protects and keeps the bee warm when at work on skunk cabbage, so that they will gather pollen from this source when it would be too cold to gather pollen from the trees, were the willow in bloom at this time. I have known bees to get pollen from this source as early as March 10, but it is more often from the 10th to the 15th of April before any pollen is obtained here in central New York.

Following skunk cabbage comes the soft maple, from which the bees obtain pollen of a reddish tinge; and 2 or 3 days later the elm blooms, from which a liberal supply is obtained, if the weather is fine. This gives the bees a great start at brood-rearing, and an advance which is rarely checked by all the unfavorable weather which may come thereafter. However, in occasional years, we have a severe freeze just at the time all these early pollen-producing flowers are about to open, which spoils the whole, and in such years it is uphill business for the bees till the willow and hard maples bloom, when large quantities of pollen are usually obtained.

As I said to start with, early pollen is something that all bee-keepers are joyful over, but in some localities, later on, bees store so much pollen in their combs that it seems to those not as familiar with the inside workings of the hive as they might be, that some device for removing this pollen would be of great benefit to them, for at a bee-convention some years ago I heard offers as great as \$25 from a single person for some plan to remove pollen from the combs.

Some advise putting these combs of pollen into tepid water and soaking a week or so till the pollen becomes soft and mushy, when the combs are to be put into the honey-extractor and the pollen and water thrown out. Others advise making combs containing much pollen into wax, and then work the wax into comb foundation to put into the hives for the bees to draw out into comb again; but all such advice seems to me to be a damage rather than a help.

In this locality we get large quantities of pollen—probably as much as is gathered in any place in the United States—yet I have never soaked or melted up a single comb on that account, neither did I ever have any thrown out by the bees, as others claim they have, unless said pollen had become moldy.

With me there are two different periods in which the bees store much more pollen than is worked by the nurse-bees into chyme for the young brood. One is during the bloom of hard or sugar maple, and the other during white clover bloom. I have had combs of pollen gathered from the yield during hard maple which weighed as high as $4\frac{1}{2}$ pounds. At such time as this I work as follows:

Whenever the bees gather so much as to crowd the queen, I take it away for the time being and place empty combs in its stead. If there come a few rainy or windy days at this time I find that this pollen is all exhausted, so that the cells are once more empty or filled with eggs, as it takes large quantities of food for the numerous brood at this season of the year. After apple-bloom there is little for the bees to work on, and the surplus of pollen is all soon used up, and more needed, when I set back that which was removed, and thus brood-rearing is kept up more effectually than by feeding syrup, honey, or any other plan of stimulative feeding, providing there is plenty of honey in the hive, which there generally is, if bad weather has not cut short the yield from the apple-bloom.

I consider plenty of pollen in the combs during the period of scarcity between apple and clover bloom of great advantage, as it keeps brood-rearing going on without a break till the honey harvest arrives.

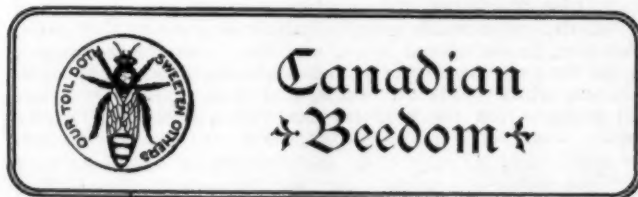
The pollen gathered during white clover is treated differently from that gathered earlier. The early rarely ever has honey plated top of it, while that from clover is placed in the cells till they are nearly $\frac{3}{4}$ full, when the cell is filled with honey and sealed over so as to preserve it against a time of need the next spring, or before bees can gather from natural sources in the early part of the year. During the summer, as I find combs containing much pollen in this preserved state, they are hung away in the room for storing combs; or, if it is so early that the wax-moth is troublesome, they are stored in upper stories over weak colonies of

bees where they will be protected till ready for their winter storage. Where stored in a room, they must be looked after, and fumigated if the moth becomes troublesome.

Combs containing much pollen under honey are distinguishable from those without, by holding them up before a strong light and looking through them, unless the combs are very old and the cells filled with the cocoons left from the maturing brood.

When spring opens I again take the opportunity of placing all combs I have on hand containing pollen, near the brood, and find that this, together with the honey stored over the pollen, which honey has to be removed before the bees can get at the pollen, answers a better purpose for stimulating brood-rearing at this time of the year, than the feeding of pea, rye, or oat meal, as some recommend. In this way the pollen is used up to a far better advantage than by inventing a machine to remove it from the combs, and saves all trouble of soaking or melting the combs as well.

Borodino, N. Y.



Conducted by MORLEY PETTIT, Villa Nova, Ont.

Specialize in Bee-Keeping

A plea for specialization in bee-keeping, by L. B. Bell, of Arizona, appears in *Farm, Field and Fireside*. After speaking of the troubles of mixed farming and bee-keeping, he says:

What show has an amateur to compete with men equipped for the fight like R. F. Holtermann, of Canada, Gill, of Colorado, or Alexander, of New York?

But, your amateur says, "These men began in a small way and worked up." True; but if you've got the bee-fever so bad you just can't let it alone, go and spend a season with some of these men and learn the business before you put a dollar into it. Most of these men will shout a hearty "Amen" to that, and you would, too, if you could go along the trail of the "working up" process and see how many wrecks there are and how few got there.

Human life is too short to have any of it wasted in dabbling.

A Bumble-Bee Apiarist

Mr. Frank Kelly, of Elgin Co., Ont., is a farmer who makes a specialty of sheep and clover seed, and also keeps bees. He recently described an ingenious system of ensuring the fertilization of the red clover blossoms. He pays the boys of the neighborhood 25 cents for every bumble-bee's nest they locate for him. This he then moves to his own premises. He inverts over the nest a funnel-shaped screen, with a small hole in the top leading into a little box. By stirring up the bees he gets them all into the box, and then takes up the nest and transports bees and all to some convenient spot on his farm. In this way he has almost "cornered" the bumble-bees of his neighborhood. In winter he protects them from mice by putting over the nest an oblong hardwood box, say 20 inches long by 10 or 12 inches wide, and the same height. A small hole, protected by a piece of tin to prevent mice gnawing it larger, permits egress and ingress of the queen. As a result of his pains, Mr. Kelly grows large fields of clover seed, averaging 4 or 5 bushels per acre. Those living near him get good crops of seed.

Mr. Kelly related an interesting experience of one year when he had pastured with sheep a field of red clover, taking the sheep off June 15. The second crop blossomed beautifully, and neighbors declared it the finest they had ever seen. It was, however, a little too early for the bumble-bees, and no seed worth mentioning was secured. —Farmers' Advocate.

This is the Mr. Kelly mentioned in this department some time ago.

National Control of Food Supplies

The Canadian Grocer has a synopsis of a lecture delivered by Anthony McGill, before the Ontario Grocers' Convention, on "National Control of Food Supplies," from which we can profitably take notes:

Food inspection is a comparatively modern innovation. About the middle of the last century Dr. Hassall published in the *London Lancet* an extended series of investigations into the character of the

various foods as offered in the London markets. A commission was appointed, and the first Adulteration Act in England was passed; Canada followed in 1874. The Act has undergone many amendments since that date, in consequence of increased experience in its working, but the fundamental principles remain unchanged.

WHAT ADULTERATION IS.

It defines adulteration as follows:

1. If any substance has been mixed with it so as to reduce or lower or injuriously affect its quality or strength;
2. If any inferior or cheaper substance has been substituted, wholly or in part, for the article;
3. If any valuable constituent of the article has been wholly or in part abstracted;
4. If it is an imitation of, or is sold under the name of another article;
5. If it consists wholly or in part of a diseased or decomposed or putrid or rotten animal or vegetable substance, whether manufactured or not; or in the case of milk or butter, if it is the produce of a diseased animal, or of an animal fed upon unwholesome food;
6. If it contains any added poisonous ingredient which may render such an article injurious to the health of a person consuming it;
7. If its strength or purity falls below the standard, or its constituents are present in quantity not within the limits of variability, fixed by the governor-in-council, as hereinafter provided;
8. If it is so colored or coated or polished or powdered that damage is concealed, or if it is made to appear better or of greater value than it really is.

Mr. McGill cites the modern tendency to manufactured foods of all kinds, and the achievements of chemistry in introducing new food products such as glucose, cotton-seed oil, cotton-seed stearin, coal-tar dyes, synthetic flavoring materials, chemical preservatives (such as salicylic acid, formalin, etc.); these substances enter into the composition of modern foods to an extent little imagined by the ordinary consumer. He does not find fault with the inventor of new food materials, but mentions the danger of trying radical experiments with the workings of the human digestive organism.

Again, in the manufacture of many new food substances, powerful chemicals are used, and great care is necessary to make sure that these are properly rendered harmless before the finished product is put on the market. Many cases of poisoning through the use of dyes containing arsenic, glucose containing free acid, and other similar instances are on record. I must, however, bear testimony to the great care which is nowadays taken by manufacturers, and to the purity of the products now offered.

CHIEF GROUND OF COMPLAINT.

The chief ground of complaint rests in the non-acknowledgement of the presence of a foreign substance. The importance which this assumes depends greatly upon the point of view. To the consumer it means that he is ignorant of what he eats. To the honest manufacturer it is a very heavy grievance, since it means unfair competition.

To the producer it is also a ground for complaining. What of the fruit-grower who finds apple, turnip or other pulp used as a basis for jam, sold as strawberry, raspberry, plum, etc., and dyed with coal-tar colors to imitate the genuine fruit? Just in the same way has the dairy farmer a right to complain of unacknowledged competition by the sale of oleomargarine or renovated butter for the genuine article; the farmer who raises pigs has a *bona-fide* grievance when cotton-seed products are substituted for lard, and so on.

WHO SHALL BE HELD RESPONSIBLE?

The consumer, naturally and inevitably, must hold the retail dealer responsible. The Adulteration Act provides the retailer with a safeguard in two ways:

First, he may plead the guaranty of the manufacturer or wholesaler, provided that he has taken the precaution to obtain such.

Second, the Inland Revenue Department (which is charged with the administration of the Food Act) provides an inexpensive means of acquainting him with the nature of the articles he sells, by chemical analysis at a nominal fee.

The manufacturer may thus be held ultimately responsible for the correct naming of his goods. There is no bar to the manufacture or sale of any wholesome food in Canada (except butter substitutes) provided that they are correctly and honestly labeled. The Act requires that such articles be distinctly labeled as a mixture, in conspicuous characters, forming an inseparable part of the label.

PENALTIES PROVIDED.

Distinct penalties attach to violations of the Act, and these may be classed as (1) penalties for adulterating foods, (2) penalties for selling adulterated foods. If the adulteration is deemed injurious to health, the penalty for a first offense may reach \$300 and costs, or 3 months imprisonment, or both; if the adulteration be deemed to be not injurious to health, the penalty may reach \$100 and costs, and is not less than \$5 and costs.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's hand-book of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, \$1.00; or with the *American Bee Journal* one year—both for \$1.75. Address all orders to this office.



Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Pollen—Its Gathering and Value

It is good fun to watch the bees carrying in pollen. Our bees seem to have such a fine time of it, or is that only imagination? At any rate, they seem to hasten into the hive very eagerly as they come home with loads so big that one wonders how they stick to the pollen-baskets. A peculiarity is that the work of pollen-carrying is not evenly divided among all the workers; the most of them do not gather pollen at all, and the rest carry extra weight.

Most of the pollen is gathered in the forenoon, but if you watch closely you may see pollen carried in again in the evening, sometimes so late that you wonder that the bees can see to find their way home.

Not every sister estimates pollen at its true value. Honey is carefully saved, but many a comb of pollen is allowed to be spoiled without compunction, and yet weight for weight it is doubtful if the honey is worth any more than the pollen—possibly not so much. In early spring, if a colony is without pollen, not a young bee can be reared till a stock of pollen is secured.

The 8-Frame Hive vs. the 10-Frame for the Sisters

In general, the sisters will use the same implements and plans in bee-keeping as those of the sterner sex, yet equally in general they will have a preference for something lighter to handle, wherever there is a choice. In the matter of hives there is a choice.

A 10-frame hive is something like 20 percent heavier than an 8-frame one, and when one is lifting about to the limit of one's strength, an addition of 20 percent is no trifle. It is true that hives do not have to be lifted very often, in some cases not at all, and in the latter case the weight does not matter. Most of the sisters, too, can have help whenever a hive is to be lifted. But in running for comb honey there are the supers, and for the larger hives they are increased in weight to a corresponding degree. Even if there is no lifting of hives there is no getting along without lifting section supers, and they must be lifted so often that it is a matter of no little consequence how heavy they are. So, if for no other reason, any woman who is working for comb honey will be likely to look with a partial eye on the 8-frame hive.

But it must not be left out of consideration that a 10-frame hive is much safer for the bees than the smaller hive, and no woman should think of adopting an 8-frame hive unless she gives very close attention to her bees. Given the same care that will pass muster with a 10-frame hive, and there will be a lot of colonies starve every winter in the smaller ones. There must be extra combs of honey to give some colonies each fall, where 8-frame hives are kept, and again in spring some colonies will starve if left to themselves. Not that bees in larger hives are always safe from starvation, but they are safe as compared with those in smaller hives.

An objection is sometimes raised to the 8-frame hive because it is not large enough to accommodate a prolific queen. True; but neither is a 10-frame hive large enough, and there is no law against giving a queen 2 stories of 8 frames each, and with 16 frames she is not likely to feel cramped for room. Then when the harvest comes, one story can be removed and super room given in its place.

When working for extracted honey, it is just as easy to handle the extracting frames in a large hive as in a small one, and the advantages of the larger hive for extracted honey are such that it has the general preference.

In comparing square with tall sections, there is one thing to be considered that makes more difference to women in general than it does to men. It is the matter of the weight of supers when the bees have filled them. A section 5 inches high is 17 percent higher than a 4 1/4 section, so a

super of the 5-inch sections will be 17 percent heavier than one of 4 1/4 sections—a matter of considerable importance.

Another matter equally concerns both sexes: The super that is 17 percent heavier will take a longer time to fill, and in general there is likely to be a little more even work in a smaller super. At the close of the season, if the bees have just enough honey to finish up a super containing 24 pounds, there would be a shortage if they were asked to fill a super containing 4 pounds more. But that exact state of affairs might not often arise.

Early Swarming in Nebraska

My bees have commenced swarming, the first swarm issuing May 22. Is this not early for central Nebraska?
Westerville, Nebr., May 24. (Miss) JENNIE BOOKNAW.

Indeed it is early, and your bees must have been in good condition to swarm thus early. They probably built up so as to swarm in fruit-bloom—an unusual thing.



Southern Beedom

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

A Sister Bee-Keeper in the South

MR. LOUIS H. SCHOLL:—My first experience with bees was 7 years ago when I found a very small swarm in my garden, and nothing else being handy, I simply put them into a flour-barrel.

To begin with, I was very much afraid of bees; in fact, all I knew about bees "was just to keep away from them." After calling up all the bravery I ever possessed—and, of course, I felt I was almost suiciding to attempt such a thing—I did really brush the bees in a paper pad and threw them under the barrel. I was almost ashamed to tell of doing such a desperate thing.

That little handful of bees did wonders the next spring. They stored such a lot of nice honey, and I am sure there was a half bushel of bees, but they never did swarm.

I kept them in the old barrel, and I never saw one colony store so much honey. I never have done as well with hives, and talk about non-swarming! If you will give them a barrel you won't be bothered with swarms!

But now I am not any more afraid of my bees, wearing neither gloves nor veil.

I can not say whether or not my bees are blacks, but they are not vicious. Any one can handle bees if he or she is not afraid of them. I love my bees, and just live with them. I do believe they love me, for I can hardly work in the garden, they follow me so much.

I have been feeding my bees lately on cake-sugar. It does not dope them like syrup.

Our main source for honey here in Arkansas, I think, is from chinquapin. We also have corn and cotton-bloom. Some say bees do not pay here, but that is not right. My husband is a cotton buyer, and, of course, we have to live in town. My bees are within 10 feet of the sidewalk, but they never bother any one. They are only common bees. I have ordered Italian queens. Can I take brood out of one or two hives and put it into a new hive and put the ordered queen with them? Of course, take some bees with the brood. I want Italian queens, but do not like to destroy the common queens. The bees in this part of the country are of a very common kind. They do not store more than 30 pounds per colony the first honey-year. I feel sure that with improved stock we could beat that.

I had a swarm act strangely last summer. They swarmed May 1, and such a fine swarm, too. But only half of them would work; the other half clustered on the outside of the hive, and just lay there until cold weather drove them in. Were there 2 queens, or what was the real trouble?

The American Bee Journal is a fine paper.

Magnolia, Ark.

MRS. JOHN WILLIAMS.

We are glad, indeed, to have our sister bee-keepers take a part in "Southern Beedom." I have often been told by "elder brethren" that we needed the ladies to help us to be successful in life. I, myself, do not know much about that for—I am not yet married; they were. However, we will be glad to hear from other sister bee-keepers of the South.

There are a great many bee-keepers who were at first very much afraid of bees, but who soon got over their timidity and became successful bee-keepers. One person I have in mind in particular, declared that he would not go near a bee-hive "with a shot-gun," but soon afterward he surprised me very much, for he had purchased a dozen colo-

nies of bees. Ever since then he has been a bee-keeper managing several apiaries, and securing large crops of honey.

The trouble with your swarm acting so strangely might have been for several reasons. Perhaps the hive was not large enough. Or the hive was poorly ventilated by the entrance being too small. My summer hive-entrances are large— $\frac{3}{4}$ inch deep, and the full width of the hive. The small $\frac{3}{4}$ -inch-depth entrance is too small, and, with a large colony, clustering out would very likely result until cooler weather.

Your experience with non-swarmer of a colony in a large flour-barrel is quite in accord with the experience of the advocates of large hives to reduce swarming. It was not the barrel, of course, but the large amount of room in it that prevented swarming. The same could have been provided in a large hive.



The "Old Reliable" as seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

Advertisements Valuable as History

Mostly we don't read bound volumes of back numbers as much as we expected to when we bound them—and when it comes to looking over *very* old ones the advertisements strike us as a very interesting part of the book—much that once made a great stir being now comically obsolete. Should decidedly object to having the ads missing from my back numbers. Obliterating them would be obliterating history, as our Editor suggests. Page 381.

Swarm and Drone Prevention

So H. S. Philbrook's idea of swarm prevention is to get the queen into business in an added story below. He finds it working well the second year. Good—so far! But, as the elements of non-success are evidently pretty thick, we must have wide and numerous successes before we draw final conclusions. Some Cyprian blood in this case it seems; and that makes it abnormal to a certain degree. We seem to get a sort of a hint that the held-in-reserve Davenport plan is the same.

Mr. Philbrook seems to have made a positive addition (although a minor one) to our manipulations. He finds that unsealed drone-brood, when sprinkled with sulphur, are immediately pulled out and carried out of the hive. Easy, and good. Page 383.

Weak-Colony-Over-Strong Experiences

And here are more experiences with the pig-a-back style of keeping a weak colony warm over a strong one. On page 390, A. L. Oliver lost half his queens. On page 411, V. Goodnow fails with 4 trials.

C. Davenport Safe in Minnesota

Those that don't believe that C. Davenport's swarm-controlling method amounts to much will don't believe it still more after reading his letter on page 401. Lucky for C. D. that the Emperor Tiberius is not reigning in Minnesota. His way of keeping dangerous secrets from getting abroad was to chop off the inventor's head.

Brown-Tail and Gypsy Moths, and Potato-Bug

And now the insect invaders of national importance that are trying to fight their way across our continent are *two* instead of one—the Brown-tail moth in addition to the Gypsy moth. Even if Massachusetts should be defeated in its heavy fight (as looks possible), the rest of the country is realizing profit at the rate of very many millions of dollars a year from each year of *delay*. Strange that people should forget that part of the situation—and sheepishly conclude that it is a useless fight that is going on. What could Ohio have afforded to pay if the potato-bug could have been de-

layed 40 years in its march to our borders? And both the insects referred to seem likely to prove very much greater scourges than the potato-bug. Gypsy eats everything green except the farmers themselves—and could it be induced to eat some of them the situation might be bettered. Just as the potato-bug left alone kills out every potato-plant in the field, so Gypsy left alone reduces territory to a desert. Page 383.

Queens and Drones Can't Digest Pollen?

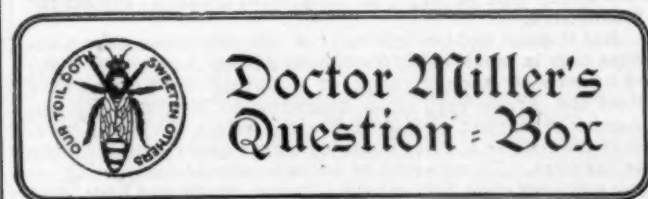
So Stachelhausen thinks that drone and queen are both unable to digest pollen for themselves. Quite possible. The alleged fact that drones only live 3 days when put with plenty of each kind of food but removed from the workers is pretty good evidence so far as they are concerned. Page 386.

Zinc and Tin Queen-Excluders

Dr. Miller answers "Ontario," on page 390, that it is bad economy to cover only part of a super-bottom with excluding zinc and the rest with plain tin. As a general proposition I will not quarrel with this; but my strain of (hybrid) bees seems to be characterized by unusual willingness to store remote from the brood-nest. All my extracting supers are that way—have been so for many years—and I wouldn't tolerate it if I could see that I was losing anything material by it. My bees often bother me by putting too large a share of the fall honey above, almost never by putting too large a share below.

That Mouse-Eating-Honey Controversy

Mr. Doolittle thinks the method proposed to show that the mouse does not relish honey would also show that the old soldier does not eat hard-tack. Never mind. I can't afford to squeal much over my own wounds in the scrimmage for pleasure in seeing him support another of my none-too-well-supported conclusions. In his actual experiences he has had both a chipmunk and a red-squirrel as pets, and both became serious nuisances on account of their fondness for honey. So I was right in ranking these animals next to the bear in that respect. I'm still "chipper" with hope that I'll turn up all right about the mouse, also. My saying that the mouse peels the cappings off honey for pastime I am willing to withdraw, or at least put it on the doubtful list. But I jump right to another inference that may worry Mr. D. still worse. After the raw and freshly lapped surface has stood for a few hours in a somewhat damp atmosphere the mouse can *lap it over again and get some water*—and again by and by. He has learned to do this as one help in the struggle for life in rooms where water can not be gotten at. But if this is not right I am still glad the performance has been viewed by a competent observer. Does not look exactly like play, at any rate. Page 403.



Send questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Dr. Miller does not answer Questions by mail.

Bees Hanging Out—Moving a Swarm—When to Take Off Full Supers—Hive Portico

1. The bees of one of my hives cluster around the entrance. This commences about 3 o'clock and gets worse until about dark. What causes this? The entrance is shaded and part of the hive, but the entrance is only $\frac{1}{2}$ x 8 inches, and can not very well be made larger. It is a 2-story hive.

2. I bought a colony of bees in an 8-frame hive, the frames being $11\frac{1}{2}$ x $11\frac{1}{2}$, and this hive was nailed shut so that no bees could get into the super, and now they fill one outside frame with honey and do not yet work in the super. Was this comb built so that no brood could be reared in it? The cells are curved upward, and are irregular. Should I cut out the comb, put in a foundation starter, and place in the middle? This colony was pretty weak, but is getting better populated, and was, no doubt, a swarm of last year.

3. What is the best time to move a swarm after it is hived?

4. To remove a super should one wait until the honey is all capped?

5. Is there any advantage in a hive having a portico in front?

PENNSYLVANIA.

ANSWERS.—1. As early as the last of May it is not usual for bees to hang out in that way, and results from the fact that the colony is too large for the hive they occupy, or else that it is too warm for them. An entrance $\frac{1}{2}$ x 8 is pretty small for a strong colony on a hot day, and if you can not make it larger you can give them a little ventilation above by allowing the cover to be partly open.

2. I wouldn't be in a hurry to cut out that frame, for it is likely they can rear brood in it all right if they want to. If you want to make sure whether they can or not, uncap the sealing of the comb and put it in the middle of the brood-nest, and you will probably find brood in it a week later. It is possible that in some way there is not as direct communication as desirable between the brood-chamber and the super. It will help to start the bees at work in the super if you put in a piece of comb on which the bees have already worked, with either honey or brood, although empty comb that has been drawn out will do very well.

3. Right away after you get the bees of the swarm in the hive. Don't wait to get a few scattering bees in; they can find the swarm where you put it, or else they can go back to the old hive. If you leave the hive standing till dark before putting it on its stand, as was formerly the custom, there is some danger that scout bees which found a suitable place will coax away the swarm to that place. At least, that is said to be the case.

4. No, if you wait till the outside sections at the corners are sealed, the central ones will become darkened. However, that doesn't hurt the taste of the honey, rather improves it, and if you want the honey for your own table, caring for the taste and not the looks, then there is no harm to have the central combs darkened. But the market demands sections of snowy whiteness.

5. It protects the bees against rain when they are clustering out. But it makes the hive warmer on hot days, and it furnishes a good place for spiders.

Likely Not Foul Brood

Will you kindly tell me if the enclosed sample is foul brood?

ARKANSAS.

ANSWER.—I am not an expert in foul brood, but I don't think there is any foul brood in the sample sent. It looks like chilled brood. If there has been no chance for chilled brood, poisoning may come in for suspicion, with just a possibility of something like pickled brood. You see I don't know very much about such things, and any one who has anything in that line should send a sample to N. E. France, General Manager of the National Bee-Keepers' Association, Platteville, Wis. If not a member, send Mr. France a dollar to make you a member.

Reports and Experiences

Watering Place for Bees

I am taking 2 bee-papers, and while I am able to keep bees I can not see how I can get along without them. I learn many kinks by reading the experiences of others, that save me much time and labor to work them out myself.

The little item in the Journal a few weeks ago about providing warm water for bees by means of a lamp under a suitable pan, is alone worth the subscription price of the paper in this late, cold spring. Only in place of a pan I made a neat, wooden trough 10x20 inches in size, with a galvanized-iron bottom, and I find it is just the thing. An empty 500-section crate with a little fixing makes an ideal box to put the lamp in, and to set the trough on, and the lamp from the Daisy foundation fastener, with an inch block under it, is just right for the business. If the water thus warmed is put out early in the spring, and the bees attracted to it by means of pieces of comb, they will commence using it before they get in the habit of getting water elsewhere, and will stick to it instead of going to roadside ditches and other places far away from home, where they get chilly water and thousands never get home, and that in a time of the year when every bee is needed in the hive.

I find a good plan is to fill the trough with lukewarm water in the morning, then turn the lamp just high enough to keep the water warm enough. A $\frac{1}{2}$ -inch board large enough

just to go inside the trough, and bored full of $\frac{1}{8}$ -inch holes, makes an ideal float.

Bees wintered fairly well outdoors, but consumed much honey and need feeding now. There is much fruit-bloom, but the weather is too cool for bees to get much benefit from it.

A. H. SNOWBERGER.

Huntington, Ind., May 8.

A Home-Made Swarm Catcher

I enclose a drawing of a swarm catcher that I made myself. It is not patented, and any one with a little mechanical skill can make



The Kilgore Home-Made Swarm Catcher and Shaking Pole.

one. I have all my queens clipped, but occasionally I have a second swarm, and if the bees settle high up in some valuable fruit-tree I can get them without climbing or cutting the tree.

To make it, get a small, light pine box about 8x10 inches. Knock off two sides of it and replace them with wire-cloth, which will make it still lighter in weight. Fasten two small hinges to the top for a lid.

Now get an 18-foot light pole; fasten the box to the end of the pole, as shown in the picture, and fasten a short rubber band at A to pull the lid shut. Then fasten a stout cord at B on top of the lid, and have it go over the pole at C and run down to the bottom.

To operate the swarm catcher, push the box up to the swarm, pull the string and open

A Little Foul Brood—Queen-Excluder Under Extracting Supers

I left a shallow extracting super on nearly all of my bees last winter. Some died, and I found a few colonies lightly affected with foul brood; say 10 to 50 cells in a hive failed to hatch. The combs in the supers were perfect—never had brood in them.

1. Is there any—or much—danger of such combs being affected?

2. If so, would I be the gainer or loser to put those supers on colonies that I will transfer into clean hives with comb foundation starters next spring?

3. Does it pay to use queen-excluders over the brood-chamber for extracting? Or would it pay better to let the queen lay where she pleases, and only extract frames with no brood and sealed brood?

OREGON.

ANSWERS.—1. It is not likely there will be any danger from using them.

2. You ought to gain by the value of the combs.

3. I don't know. A great many consider excluders indispensable when working for extracted honey, but so good a bee-keeper as C. P. Dadant says he has no use for excluders under his extracting supers.

No Queen-Excluder Under Sections

Would it be advisable for me to use a queen-excluding honey-board when I run for comb honey? I never have had any trouble with queens or drones going up into the sections! It seems to me that the bees can work better in the supers without the board.

MISSOURI.

ANSWER.—If your queens never go up into the sections, what good can an excluder do? I can not say that my queens never go up into the supers, for once in a great while one does go up, but I would rather stand the inconvenience of those few times than to have excluders, so I never use them under sections.

Destroying Ants in Hives

How can I destroy ants? My hives are just covered with them.

MINNESOTA.

ANSWER.—If the ants have their nest under the hive or somewhere near, pour gasoline or kerosene upon them. If their nest is inside the hive, it is because there is a warm place there for them where the bees can not get at them. Powdered borax sprinkled in such places helps to make them disagreeable for the ants, but the best way is to have no place for shelter where the bees can not get at the ants to rout them. If quilts are kept over the frames, that suits the ants exactly, but with only a flat cover over, the ants can find no place safe from the attacks of the bees.

the lid. Now give the pole a quick push up against the limb, when the bees will fall into the box. Release the string and the rubber band will close the lid.

Dump the bees in front of the hive, and if they are not all caught use the box a second time.

I also have an 18-foot pole with a hook on the end, and if the bees persist in returning to the limb of the tree, hook the pole over the limb and keep shaking the limb until all come down and go into the hive with the swarm.

I like this arrangement better than the

Manum swarm catcher. My outfit is a success with me, and I could not do without it.

London, Ohio.

S. G. KILGORE.

Black Bees vs. Italians—Large Hives

'Tis not always gold that glitters. 'Tis not always beauty that shines. Though often designed to construe another meaning, yet it will very fitly apply to the fakes and fancies in the apicultural field of to-day.

What is the prime object of the tollsome bee-keeper as he launches his little craft upon the sea of apiculture? Is it fame? Is it glory? No. Canst thou, by taking thought, add one cubit to thy stature, or canst thou make one hair white or black? Well do I remember as I scan backward across the ledger

of life radiant with boyhood's dreams and fancies, how I loved to watch the long rows of bee-hives, and guess this one will swarm to-day. See how they cluster out! How rich they must be! Perchance I ran across an advertisement of queen-bees; I at once ordered a catalog, and then a book on bees. My fancy was stolen away as I unfolded its magic pages.

My post-office was then 5 miles away. In the morning I hurried off for Beech Creek office to order an Italian queen. It's almost a sin to keep black bees according to the book I bought. In due time I went to the post-

office to see if her majesty had arrived. I made the usual inquiry, "Is there any mail?" "Yes, sure. A little box full of flies." I hastened away with my "Italian flies." The queen was safely introduced by the old Peet method, and another was ordered.

The queens wintered in fine order. The following summer was poor, and there was no chance for comparison between the races. But many more yellow queens were ordered. The next season was fairly good. As usual I put sections on all the good colonies. Upon examination a few days later I found in most of the hives active work was going on in the

sections, while the Italians were doing nothing upstairs.

But, hark! whence comes that sharp, buzzing sound that has run so often in every bee-keeper's ears! Yes, sure as fate, No. 20—my fine yellow colony with a Dixie queen—is swarming. And so in turn as the days go by the long ladder is mustered into service almost every day, hiving those pesky Italians. But what are the blacks doing? Look in their boxes—they are almost full, and only 2 swarms! Fall comes, 85 pounds average for the blacks and 25 pounds for the Italians. Surely, my object was accomplished. I had

The Bee-Hive Clock

A \$4.00 CLOCK FOR \$2.50 ... With the American Bee Journal 1 Year—Both for Only \$3.00

We have originated and had made specially for our readers, a bronzed-metal Clock, called "The Bee-Hive Clock." It is 10½ inches wide at the base, 9¼ inches high, and deep enough at the base to stand firmly on a mantel or elsewhere. It is a beautiful piece of work, and would be both ornamental and very useful in any house, and particularly in a bee-keeper's home.

The Clock part itself is warranted for 3 years to keep good time. So it is no plaything, but a beautiful and needful article for everyday use.

Clocks like "The Bee-Hive Clock" usually sell in the stores at from \$4.00 to \$5.00 each, but having them made for us in quantities enables us to offer them at \$2.50 each by express, or with the American Bee Journal a year—both for only \$3.00. Either Clock or Journal would make an ideal gift.

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Send us 5 New Subscribers to the Weekly American Bee Journal for one year, at \$1.00 each, and we will send you this beautiful "Bee-Hive Clock" FREE (excepting express charges). Or, send us 4 New Subscribers (at \$1.00 each) and 50 cents—\$4.50 in all. Or, 3 New Subscribers (at \$1.00 each) and \$1.00—\$4.00 in all. Or, 2 New Subscribers (at \$1.00 each) and \$1.50—\$3.50 in all.



Only \$2.50, f.o.b. Chicago, by Express. Weight, with packing, about 4 pounds.

What Dr. Miller Thinks of the Bee-Hive Clock

Busily ticking away, in the room where I am sitting, stands a genuine bee-keeper's clock (please understand that the word "genuine" belongs to the clock and not to the bee-keeper) or, as the legend upon the clock has it, "The Bee-Hive Clock." I don't know

whether the idea of getting up such a clock was conceived in the brain of the Editor of the American Bee Journal, or whether he got it elsewhere, but the wonder is that such a thing was not thought of long before.

Setting aside all idea of its association with the business of a bee-keeper, there is a peculiar appropriateness in having the minutes and the hours "told off" in a case representing the home of the busy little workers. The glance at the clock, with its ceaseless tick, tick, tick, can not fail to remind one that the flying moments must be improved now or be forever lost, and that suggestion is reinforced by the thought of the never ceasing activity of the little denizens of the hive, always busy, busy, busy, working from morn till night and from night till morn, working unselfishly for the generations to come, and literally dying in the harness.

Let us be thankful that the form of the old-fashioned straw hive or skep was adopted, and not that of any modern affair, patented or unpatented. The latter smacks of commercialism, but the former of solid comfort, for no other form of hive has ever been devised that contributes so fully to the comfort and welfare of a colony of bees as does the old-fashioned straw-hive. It appeals, too, to one's artistic sense as can no angular affair of more modern times. As an emblem of industry, artists have always used—probably always will use—the old straw skep.

Thanks, Mr. Editor, for furnishing us a time-keeper so appropriate for all, and especially for bee-keepers. C. C. MILLER.

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turned a leaf and begun working for glory. I got the glory, but precious little honey. Probably the Italians would have made things hum for extracted honey with plenty of empty combs. This shows that nothing is perfect under the sun. Though I am proud to say I have had some better success with Italians of late. I had a few hustlers, but, after all, the honey was not so fancy. It looked greasy or water-soaked, and did not demand the high price that we got for No. 1 fancy.

In the mountains of Western North Carolina are wide stretches of forests where the sound of the woodman's ax is not heard; where are towering cliffs and lonely dells where Nature weeps and echoes die. Here the black bees have found an ideal home, as the years have passed.

I procured from a colored man a colony of black bees from a remote place 12 years ago. It was in a section of a hollow tree called in the South "a gum." It was so heavy that I could carry it only a few steps at a time till I must rest. At length I got it home to my apiary. The following spring I transferred the bees to frames and gave them 2 stories of 8 frames each. The hive stands there yet. I never have fed those bees a pound. They don't swarm, and never fail to give their quota of honey and of the best quality. Can

we not infer from this that through ages in places so roomy the instinct to swarm has been lost?

This brings us on to large hives. The convenience and adaptability of small hives may be painted in glowing characters by their many advocates, but after a series of years I am forced to the conclusion that the majority of bee-keepers are using too small a hive, not only in the South, but in the North also.

On this my first trip North (to Hudson, N. Y.) I noticed the same contrast between large and small hives as I find in North Carolina, the large always far outstripping the small. Some have objected to the honey that must go to the brood-chamber of a large hive as dead capital. Would you not as well object to the large slices of meat that lie on the platter, upon which your children feast to give them bone and muscle to surmount the problems of life? So with the busy bee—too much is just enough. G. W. McGUIRE.

Dark Ridge, N. C.

Prospects All Right

We have had no frost to injure fruit-bloom so far this spring; no excessive rain either, and the prospects for bees and fruit are all right, up to date.

My bees are just booming, but I have experienced too many "slips between the cup and the lips" in my life to be too hopeful.

WM. STOLLEY, SR.

Grand Island, Nebr., May 22.

Rain Starts Bees on Clover

It has been exceedingly dry here, and vegetation is beginning to dry up. A good rain yesterday has started bees on white clover. Bellevue, Ohio, June 6. H. G. QUIRIN.

Queen-Button for Bee-Folks



This is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or six for 25c. The American Bee Journal one year and 4 buttons for \$1.10. Address all orders to

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Choice home-bred and imported stock. All Queens reared in full colonies.

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One Untested Queen	\$.90
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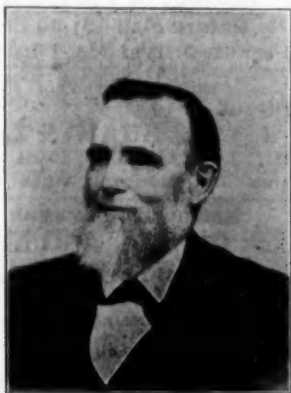
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Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees, 544 pages, 295 illustrations. Bound in cloth. 19th thousand. Price, \$1.20.

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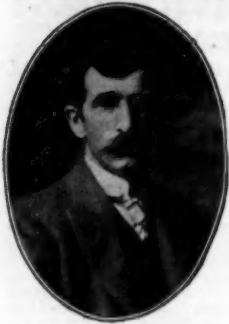
Honey as a Health Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey the more honey they will buy. Prices: Sample copy for 2-cent stamp; 50 copies for 70 cents; 100 for \$1.25; 250 for \$2.25; 500 for \$4.00; or 1000 for \$7.50. Your business card printed free at the bottom of the front page on all orders for 100 or more copies.

Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. About 20 years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, \$1.00.

"The Honey-Money Stories."—A 64-page-and-cover booklet, 5 1/2 x 8 1/2 inches in size, printed on best quality paper. Many short, bright stories interspersed with facts and interesting items about honey and its use. The manufactured comb honey misrepresentation is contradicted in two items, each occupying a full page, but in different parts of the booklet. It has in all 33 fine illustrations, nearly all of them being of apiaries or apiarian scenes. It also contains 3 bee-songs, namely, "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and "The Bee-Keepers' Lullaby." This booklet should be placed in the hands of everybody not familiar with the food-value of honey, for its main object is to interest people in honey as a daily table article. Price, 25 cents, or 3 copies for 50 cents.

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Is covered by two Patents. With this wonderful invention the cost of making Sections may be reduced to \$1.15 per 1000. If such Machine will interest you, write for further information. Do not write about it unless you mean business.

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Wanted

To sell lot of 300 empty 60-lb. capacity Honey-Cans. All in one lot, or less quantities. Cans are in first-class condition.

We are also in the market for Fancy Comb and Extracted Honey. Correspondence solicited

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Original Direct Draft OILY Bee Smokers

4 Largest Sizes Boot Burning

Never Go Out
And last from 5 to 21 years

OTISVILLE, PA., Jan. 13, 1904.

Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.

FRED FODNER.

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Thin 4-lb. Smoker Engine 8½-inch 3-inch 2½-inch 2-inch Wonder
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Such is the kind of Hives we make, and such is the kind you get when you buy from us.

"It is a cinch" that we make lower prices than you can get from any dealer, as you save the middleman's profit when you buy direct from the manufacturer.

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Send us a list of your wants, and let us make you prices.

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We have large stocks of Dovetailed Hives, Sections, Shipping-Cases, Foundation, Vells, Smokers, etc., on hand, and can ship promptly.

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Sample copy free.

Our large, illustrated, Price-List of Supplies free on application. Address,

The W. T. Falconer Mfg. Co.

JAMESTOWN, N. Y.

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Honey and Beeswax

CHICAGO, June 5.—The honey market is in about the same condition as when we quoted last. Very little call for either comb or extracted. No. 1 white comb, 15c; other grades, 10@14c. Extracted, white, 6½@7c; amber, 5@6c. Beeswax, 30c. R. A. BURNETT & CO.

TOLEDO, Feb. 19.—The market for comb honey has been better for the past two weeks than at any time during the past season. Prices are firm on account of the scarcity. We are getting 15@16c for fancy white clover; 14@15c for No. 1, and 13@14c for amber. Buckwheat, 13c. Extracted honey is in good demand at following prices: White clover in barrels brings 6½@7c; amber, 5½@5¾c; in cans every grade from 1@1¼c higher. Beeswax is firm and in good demand at 28 and 30c.

The above are our selling prices, not what we pay. GRIGGS BROS.

INDIANAPOLIS, May 12.—Fancy white clover comb brings 16c; No. 1, 14c; demand exceeds the supply; fancy white western comb brings 14@15c; amber grades in poor demand at 12c. Best grade of extracted honey brings 8¼@9c in 60-pound cans; amber, 6c. Good average beeswax sells here for \$33 per 100 pounds. WALTER S. POWDER.

PHILADELPHIA, May 31.—The season is so far advanced that there is not enough call for comb honey to fix a price. Some few lots are being sold at the best offers. We quote: Extracted, fancy white, 7c; amber, 5½@6c. Beeswax, 29c.

We are producers of honey and do not handle on commission. WM. A. SELSER.

NEW YORK, May 8.—There is still some demand for comb honey, mostly for fancy grades, which are selling at from 14@15c per pound; off grades in no demand and prices are irregular, ranging from 8@12c, according to quality; sufficient supply to meet demand. Extracted is in fair demand, mostly from California, of which there seems to be abundant supply of all grades. We quote: White, 6½@7c; light amber, 6c; dark, 5@5½c, according to quality and quantity. Beeswax scarce and firm at 29@30c. HILDRETH & SEGELKEN.

Headquarters for Bee-Supplies

Complete Stock for 1906 now on hand.

FREIGHT-RATES FROM CINCINNATI

are the LOWEST, ESPECIALLY for the SOUTH

as 'most all freight now goes through Cincinnati.

You will Prompt Service is what I practice. Satisfaction Guaranteed.

SAVE MONEY BUYING FROM ME. Catalog mailed free. Send for same.

Let me book your Order for **QUEENS** bred in separate apiaries, the **GOLDEN YELLOWS, CARNIOLANS, RED CLOVERS** and **CAUCASIANS**.

For prices, refer to my catalog, page 29.

C. H. W. WEBER CINCINNATI, OHIO

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

CINCINNATI, March 8.—The conditions of the market, at the present time, are not encouraging. Honey is offered from all sides, at prices utterly regardless of the value of the article. At the same time, all indications point to an unusually good honey crop, which adds in making it a drag on the market. Amber extracted honey in barrels, 5@6½c; fancy white, in cans, 6½@8½c. Choice yellow beeswax, 30c, delivered here. THE FRED W. MUTH CO.

DENVER, Feb. 5.—Owing to the mild weather the demand for honey has not been as good as usual at this time of year. We are quoting strictly No. 1 white alfalfa comb honey at \$3.35 to \$3.75 per case of 24 sections; off grade and light amber at \$3 to \$3.30. White extracted alfalfa in 60-pound cans, 7½@8½c; light amber, 6½@7½c. Beeswax, 24c for clean yellow. THE COLO. HONEY-PRODUCERS' ASSN.

KANSAS CITY, May 31.—The honey market here is bare, no new honey in market yet. The market is about \$3.25 per case on fancy white. Extracted, 5½@6c. On account of the warm weather and heavy receipts of fruits, the inquiry for honey is dropping off, but we believe with the advent of new honey there will be a good demand for same. C. C. CLEMONS & CO.

CINCINNATI, March 7.—The demand for comb honey is slow, prices obtained are the same. Stock on hand seems to be sufficient to supply the wants. Quote fancy white, 14@16c. Amber extracted in barrels, 5½@5¾c; in cans, ¼c more; fancy white clover in 60-lb. cans, 7½@8¼c; Southern, equal to white clover in color, from 6½@7c. Bright yellow beeswax, 30c. C. H. W. WEBER.

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FOR SALE

Until further notice, finest quality new crop California Water-White White Sage and Light Amber HONEY in 60-lb. tins, 2 in a case; new cans and new cases. Write for prices and samples, and state quantity you want.

HILDRETH & SEGELKEN

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FOR SALE

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WE SELL ROOT'S GOODS IN MICHIGAN Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

M. H. HUNT & SON,

BELL BRANCH, WAYNE CO., MICH.

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BEE-SUPPLIES

We handle the finest Bee-Supplies, made by the W. T. Falconer Mfg. Co., Jamestown, N. Y. Big Discounts on early orders. Let us figure with you on your wants.

MUTH SPECIAL DOVETAIL HIVES have a Honey-Board, Warp-Proof Cover and Bottom-Board. Think of it, same price as the regular styles. See our Catalog.

THE FRED W. MUTH CO.

51 Walnut Street,

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FIVE POINTS OF COMPARISON

Just recently a Lewis agent complained that another concern was selling a hive cheaper than the Lewis hive, with the statement that he could not understand how that firm could afford to undersell the Lewis Company. We straightway had one of these so-called cheap hives sent to us at Watertown, and after a careful and unbiased inspection of the hive in comparison with the Lewis hive, we are able to give the answer as illustrated below.

1. THE MATERIAL was a poor quality of pine, containing knots and other imperfections.

2. THE COVER was of the simplest and cheapest design.

3. THE BODY was crudely made, having no handles.

4 THE FRAMES were very poorly made, the end-bars roughly sawed, showing poor spacing, and were not pierced.

5. THE SUPER contained no super springs. The slat fences were made of thin, flimsy pieces, so thin as to be easily broken even by shipment. The section-holders and section-slats were rough on both sides.

LEWIS HIVES are all made of the best Wisconsin White Pine, absolutely clear.

LEWIS COVERS are all standard covers, made strong and substantial.

LEWIS BODIES go together snugly and are all fitted with handles.

LEWIS FRAMES are accurately and carefully made to give correct bee-spacing, and in the Dovetailed and Wisconsin hives are always pierced.

LEWIS SUPERS are all completely furnished with super springs, the fences are made of strong pieces firmly put together. The slats and section-holders are made of good lumber, smoothly planed.

Summing up the matter, it was like comparing a Soap-Box with a Parlor Cabinet.

Mr. Bee-Keeper, which will you have?

26 Distributing Points in the United States. Here they are:

ENGLAND—E. H. Taylor, Welwyn, Herts
CUBA—C. B. Stevens & Co., Havana
C. B. Stevens & Co., Manzanillo
CALIFORNIA—The Chas. H. Lilly Co., San Francisco
SOUTHERN CALIFORNIA—Paul Bachert, Lancaster
Fletcher-Doyle Co., San Diego
Fallbrook Co-operative Ass'n, Fallbrook
COLORADO—R. C. Aikin, Loveland
Arkansas Valley Honey-Producers' Association, Rocky Ford

COLORADO—(Continued.)
Colorado Honey-Producers' Association, Denver.
Grand Junction Fruit-Growers' Association, Grand Junction.
Robert Halley, Montrose
IOWA—Adam A. Clarke, Le Mars
Louis Haussen's Sons, Davenport
W. J. McCarty, Emmetsburg.
ILLINOIS—York Honey & Bee-Supply Co., Chicago
Dadant & Sons, Hamilton, Ill.
INDIANA—C. M. Scott & Co., Indianapolis

MICHIGAN—A. G. Woodman Co., Grand Rapids
MINNESOTA—Wisconsin Lumber Co., 432 Lumber Exchange, Minneapolis, Minn.
MISSOURI—E. T. Abbott, St. Joseph
OHIO—Norris & Anspach, Kenton
OREGON—The Chas. H. Lilly Co., Portland
PENNSYLVANIA—Cleaver & Greene, Troy
TEXAS—Southwestern Bee Co., San Antonio
UTAH—Fred Foulger & Sons, Ogden
WASHINGTON—The Chas. H. Lilly Co., Seattle

G. B. LEWIS COMPANY

WATERTOWN, WIS., U. S. A.